

REMARKS

Claims 1-4 are pending in this application. By this Amendment, claim 1 is amended. No new matter is added. Reconsideration of this application is respectfully requested.

Entry of the amendment is proper under 37 CFR §1.116 since the amendment satisfies a requirement of form asserted in the previous Office Action. Entry of the amendment is thus respectfully requested.

I. Objection to the Claims

The Office Action objects to claim 1 for including an informality. Specifically, the Office Action objects to claim 1 for not including a comma after the phrase "gap layer" at line 10. Claim 1 is amended to include a comma after the phrase "gap layer" at line 10.

Withdrawal of the objection is respectfully requested.

II. §103 Rejection Over Daby/Liu

The Office Action rejects claims 1 and 2 under 35 U.S.C. §103(a) over U.S. Patent No. 6,683,749 to Daby et al. ("Daby") in view of U.S. Patent No. 6,524,491 to Liu et al. ("Liu"). This rejection is respectfully traversed.

Independent claim 1 recites a method of manufacturing a thin-film magnetic head, that includes, among other features, patterning a second magnetic pole layer by etching while using a mask, so that a width of the second magnetic pole layer in the track width direction is smaller than that of the residual area (of a first magnetic pole layer).

Support for the feature emphasized above may be found throughout the original specification and drawings. For example, specific support may be found at least at paragraphs [0054]-[0056] and Figs. 13-14 of the specification. As described at paragraph [0056], an insulating layer about the residual area of the first magnetic pole layer prevents the etching process from cutting into the magnetic material of the lower magnetic pole layer 10. In this manner, material from the lower magnetic pole layer 10 is prevented from adhering to

the root of the first upper magnetic pole part 26a and its vicinity and obstructing, as described in paragraph [0006], the etching process used to reduce the width of the second magnetic pole layer in the track width direction.

The Office Action acknowledges that Daby does not teach "patterning the second magnetic pole layer by etching while using a mask, so that a width of the second magnetic pole layer in the track width direction is smaller than that of the residual area." However, the Office Action asserts that Liu teaches such a feature and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Daby to include the above feature as taught by Liu because doing so would result in a thin-film magnetic head that would provide the benefits of reduced edge erasure and adjacent track writing during operation. This is incorrect.

Daby states at col. 1, lines 40-43, that it is an object of Daby to "provide a magnetic transducer having an inverted write element with a zero delta in pole tip width." As explained at col. 2, line 65 through col. 3, line 4, in [a magnetic transducer], the bottom pole upper portion width defines a first write track width when the bottom pole is a trailing pole and the top pole main portion width defines a second write track width when the top pole is the trailing pole. [In a magnetic transducer having a zero delta in pole tip width], the first and second write track widths are substantially equal as the bottom pole upper portion width and the top pole main portion width are substantially equal.

As stated in Daby at col. 1, lines 29-60, it would be desirable, and it is an object of Daby, to provide a magnetic transducer having an inverted write element with a zero delta in pole tip width which provides the same write track width in both directions of movement of magnetic storage media relative to the magnetic transducer while providing relatively small erase bands.

Therefore, contrary to the assertion of the Office Action, one of ordinary skill in the art at the time the invention was made would not have been motivated to modify the magnetic transducer described in Daby so that a width of the second magnetic pole layer and the track width direction is smaller than that of the residual area, as recited in claim 1. Modifying Daby in such a manner would not produce a magnetic transducer with a zero delta in the pole tip width and, therefore, would not result in a magnetic transducer which provides the same write track width in both directions of movement of magnetic storage media relative to the magnetic transducer while providing relatively small erase bands, as addressed above.

For at least this reason, the combination of Daby and Liu is improper because such a combination would render Daby unsuitable for its intended purpose, i.e., to provide a magnetic transducer having a zero delta in pole tip width, as addressed above.

Accordingly, any reliance upon the Daby/Liu combination to reject claim 1 under 35 U.S.C. §103(a) is improper.

Accordingly, it is respectfully submitted that claim 1 is patentably distinguishable over the applied art. Claim 2 depends from independent claim 1 and is likewise patentably distinguishable over the applied art for at least its dependence on an allowable base claim, as well as for additional features claim 2 recites. Accordingly, withdrawal of this rejection is respectfully requested.

III. §103 Rejection Over Daby/Liu and Schultz

The Office Action rejects claim 3 under 35 U.S.C. §103(a) as unpatentable over Daby in view of Liu and further in view of U.S. Patent No. 5,640,753 to Schultz et al. ("Schultz"). This rejection is respectfully traversed.

Claim 3 depends from claim 1. Schultz fails to overcome the above-described deficiency of the Daby/Liu combination with respect to claim 1. Therefore, the asserted

combination of Daby/Liu and Schultz does not teach or suggest the combinations of features recited in claim 1.

For at least these reasons, it is respectfully submitted that claim 3 is patentably distinguishable over the applied art for at least the reasons discussed above with respect to claim 1, as well as for additional features that claim 3 recites. Withdrawal of the rejection is respectfully requested.

IV. §103 Rejection Over Daby/Liu and Sasaki

The Office Action rejects claim 4 under 35 U.S.C. §103(a) as unpatentable over Daby in view of Liu and further in view of U.S. Patent No. 6,278,580 to Sasaki et al. ("Sasaki"). This rejection is respectfully traversed.

Claim 4 depends from claim 1. Sasaki fails to overcome the above-described deficiency of the Daby/Liu with respect to claim 1. Therefore, the asserted combination of Daby/Liu and Sasaki does not teach or suggest the combinations of features recited in claim 1.

For at least these reasons, it is respectfully submitted that claim 4 is patentably distinguishable over the applied art for at least the reasons discussed above with respect to claim 1, as well as for additional features that claim 4 recites. Withdrawal of the rejection is respectfully requested.

V. **Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-4 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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